Amendment to the Claims

1 (Previously Presented). A method for interoperability of a wireless network interface protocol with an Internet interface protocol to ensure a high data throughput, the method comprises:

receiving a scan channel request of a plurality of channels that are in accordance with the network interface protocol, wherein each of the plurality of channels have a different associated radio frequency (RF) signal;

determining whether an Internet packet is being received via one of the plurality of channels when the channel scan request is received;

when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels;

after scanning the at least one other channel, tuning to the one of the plurality of channels and transmitting at least one outbound Internet packet; and

scanning at least another channel of the plurality of channels.

2 (Original). The method of claim 1, wherein the receiving a channel scan request further comprises:

periodically receiving the channel scan request from a host device to determine whether another one of the plurality of channels contains data of interest to the host device.

3 (Original). The method of claim 1, wherein the determining whether the Internet packet is being received further comprises:

determining that a source of the Internet packet and a destination of the Internet packet have established a Transmission Control Protocol (TCP) connection.

4 (Previously Presented). The method of claim 3, wherein the Internet packet is formatted in accordance with an Internet Protocol (IP), such that the Internet interface protocol is in accordance with a TCP/IP protocol.

5 (Original). The method of claim 1 further comprises, after scanning the at least another channel of the plurality of channels:

determining whether each of the plurality of channels have been scanned;

when each of the plurality of channels have not been scanned, tuning to the one of the plurality of channels to transmit at least one further Internet packet; and

continuing between scanning channels of the plurality of channels and tuning to the one of the plurality of channels until each of the plurality of channels has been scanned.

6 (Original). The method of claim 1, wherein the network interface protocol is in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

7 (Original). The method of claim 1, wherein the tuning to the one of the plurality of channels to transmit at least one outbound Internet packet further comprises:

receiving at least one additional Internet packet.

8 (Previously Presented). A method for interoperability of a network interface protocol with an Internet Protocol to ensure a high data throughput, the method comprises:

when a Transmission Control Protocol (TCP) connection is established between a source and a destination, receiving a network interface protocol channel scan request; and

when the network interface protocol channel scan request is received, hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) having an associated radio frequency (RF) signal and other channels of the WLAN having other associated RF signals and transmitting on the channel supporting the TCP connection to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN.

9 (Original). The method of claim 8 further comprises periodically receiving the network interface protocol channel scan request from a host device to determine whether another one of the plurality of channels contains data of interest to the host device.

10 (Original). The method of claim 8, wherein the packet is formatted in accordance with an Internet Protocol (IP), such that the Internet interface protocol in accordance with a TCP/IP protocol.

11 (Original). The method of claim 8, wherein the hopping between the channel supporting the TCP connection and the other channels further comprises:

iteratively hopping between scanning one of the other channels and the channel supporting the TCP connection until each of the other channels has been scanned, wherein, during a time when tuned to the channel supporting the TCP connection, at least one datagram is transmitted.

12 (Original). The method of claim 11 further comprises:

during the time when tuned to the channel supporting the TCP connection, receiving at least one new datagram.

13 (Original). The method of claim 8, wherein the network interface protocol is in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

14 (Previously Presented). A communication device comprises:

wireless network interface module to provide connectivity to a wireless local area network (WLAN) in accordance with at least one wireless network interface protocol, wherein the WLAN is coupled to an Internet, and wherein the connectivity is provided via one of a plurality of channels of the WLAN, wherein each of the plurality of channels have a different associated radio frequency (RF) signal;

processing module operably coupled to transceive datagrams to and from the Internet via the wireless network interface module; and

memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to:

process data in accordance with an utility application to produce a message;

process the message in accordance with a transport application to produce a packet;

process the packet in accordance with an Internet Protocol to produce at least one of the datagram;

generate a channel scan request in accordance with the transport application;

determine whether one of the datagrams is being received when the channel scan request is generated;

when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels;

after scanning the at least one other channel, tune to the one of the plurality of channels and transmitting at least one outbound datagram; and

scanning at least another channel of the plurality of channels.

15 (Original). The communication device of claim 14, wherein the memory further comprises operational instructions corresponding to an operating system of a computer, wherein the transport application is included in the operating system.

16 (Original). The communication device of claim 14, wherein the memory further comprises operational instructions that cause the processing module to determine whether the datagram is being received further comprises:

determining that a source of the datagram and the communication device have established a Transmission Control Protocol (TCP) connection.

17 (Previously Presented). The communication device of claim 14, wherein the memory further comprises operational instructions that cause the processing module to, after scanning the at least another channel of the plurality of channels:

determine whether each of the plurality of channels have been scanned;

when each of the plurality of channels have not been scanned, tune to the one of the plurality of channels to transmit at least one additional datagram; and

continue between scanning channels of the plurality of channels and tuning to the one of the plurality of channels until said each of the plurality of channels has been scanned.

18 (Original). The communication device of claim 14, wherein the at least one network interface protocol is in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

19 (Original). The communication device of claim 14, wherein the memory further comprises operational instructions that cause the processing module to tune to the one of the plurality of channels to transmit at least one outbound datagram further comprises:

receive at least one additional datagram.

20 (Previously Presented). A communication device comprises:

wireless network interface module to provide connectivity to a wireless local area network (WLAN) in accordance with at least one wireless network interface protocol, wherein the WLAN is coupled to an Internet, and wherein the connectivity is provided via one of a plurality of channels of the WLAN, wherein each of the plurality of channels have a different associated radio frequency (RF) signal;

processing module operably coupled to transceive datagrams to and from the Internet via the wireless network interface module; and

memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to:

process data in accordance with an utility application to produce a message;

process the message in accordance with a transport application to produce a packet;

process the packet in accordance with an Internet Protocol to produce at least one of the datagram;

when a Transmission Control Protocol (TCP) connection is established between a source and the communication device, generate a network interface protocol channel scan request; and

when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN and other channels of the WLAN and transmitting on the channel supporting the TCP connection to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN.

21 (Original). The communication device of claim 20, wherein the memory further comprises operational instructions that cause the processing module to hop between the channel supporting the TCP connection and the other channels by:

iteratively hopping between scanning one of the other channels and the channel supporting the TCP connection until each of the other channels has been scanned, wherein, during a time when tuned to the channel supporting the TCP connection, at least one datagram is transmitted.

22 (Original). The communication device of claim 21, wherein the memory further comprises operational instructions that cause the processing module to:

during the time when tuned to the channel supporting the TCP connection, receive at least one new datagram.

23 (Original). The communication device of claim 20, wherein the network interface protocol is in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

24 (Previously Presented). A wireless network interface module comprises:

processing module; and

memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to:

receive a channel scan request in accordance with a transport application;

determine whether one of the datagrams is being received by one of a plurality of channels when the channel scan request is generated, wherein each of the plurality of channels has an associated radio frequency (RF) signal;

when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels;

after scanning the at least one other channel, tune to the one of the plurality of channels and transmitting at least one outbound datagram; and

scanning at least another channel of the plurality of channels.

25 (Original). The wireless network interface module of claim 24, wherein the memory further comprises operational instructions that cause the processing module to determine whether the datagram is being received further comprises:

determining that a source of the datagram and a communication device incorporating the wireless network interface have established a Transmission Control Protocol (TCP) connection.

26 (Original). The wireless network interface module of claim 24, wherein the memory further comprises operational instructions that cause the processing module to, after scanning the at least another channel of the plurality of channels:

determine whether each of the plurality of channels have been scanned;

when each of the plurality of channels have not been scanned, tune to the one of the plurality of channels to transmit at least one additional datagram; and

continue between scanning channels of the plurality of channels and tuning to the one of the plurality of channels until each of the plurality of channels has been scanned.

27 (Original). The wireless network interface module of claim 24 operates in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

28 (Original). The wireless network interface module of claim 24, wherein the memory further comprises operational instructions that cause the processing module to tune to the one of the plurality of channels to transmit at least one outbound datagram further comprises:

receive at least one additional datagram.

29 (Previously Presented). A wireless network interface module comprises:

processing module; and

memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to:

when a Transmission Control Protocol (TCP) connection is established between a source and a destination, receive a network interface protocol channel scan request; and

when the network interface protocol channel scan request is received, hop between a channel having a first radio frequency supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN having other radio frequencies and transmitting on the channel supporting the TCP connection to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN.

30 (Original). The wireless network interface module of claim 29, wherein the memory further comprises operational instructions that cause the processing module to hop between the channel supporting the TCP connection and the other channels by:

iteratively hopping between scanning one of the other channels and the channel supporting the TCP connection until each of the other channels has been scanned, wherein, during a time when tuned to the channel supporting the TCP connection, at least one datagram is transmitted.

31 (Original). The wireless network interface module of claim 30, wherein the memory further comprises operational instructions that cause the processing module to:

during the time when tuned to the channel supporting the TCP connection, receive at least one new datagram.

32 (Original). The wireless network interface module of claim 29 operates in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.